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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,140	09/25/2003	Roger Graham Byford	VOCO / 07	7571

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WOOD, HERRON & EVANS, LLP
2700 CAREW TOWER
441 VINE STREET
CINCINNATI, OH 45202

EXAMINER

CUMMING, WILLIAM D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10671140	9/25/03	BYFORD ET AL.	VOCO / 07

WOOD, HERRON & EVANS, LLP
2700 CAREW TOWER
441 VINE STREET
CINCINNATI, OH 45202

EXAMINER

WILLIAM D. CUMMING

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2617	20081216

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Commissioner for Patents

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. The application has been amended as follows:

IN THE SPECIFICATION, PAGE 18, LINE 20, REPLACE THE PARAGRAPH WITH THIS PARAGRAPH

"In accordance with another aspect of the present invention, user speech may be discriminated with respect to extraneous speech noises. The data is then not transmitted unless user speech is detected. To that end, headset 60 may include another microphone, such as a second microphone 41, as illustrated in Figure 4. Outputs from the microphones are used to discriminate user speech from extraneous audio signals or sounds. The second microphone 41 is configured to capture sound and generate audio signals similar to microphone 40. However, in accordance with one aspect of the invention, microphone 41 might be positioned at a location remote or spaced away from microphone 40. Microphone 40 will generally be positioned proximate to the user's mouth to capture the user's speech. The second microphone 41 is utilized to make possible the detection of user speech in the presence of extraneous sounds, such as public address system voice sounds, on the operation of the overall system incorporating the headset 16 and the terminal 10. Specifically, each of the microphones 40, 41 is configured to generate signals that have respective signal levels. Because of its position, microphone 40 is configured to detect a greater proportion of speech sounds of a user than the second microphone will detect. However, both microphones will hear, generally equally, those extraneous non-speech noises removed from the user, such as box drops, equipment noises, or P.A. sounds. The processing circuitry 30 of the invention includes circuitry that is configured to compare signal characteristics, such as relative signal energy levels, of those signals that are generated by the two microphones 40, 41 to determine if the user is speaking. For example, with an extraneous sound, the relative difference in the signal levels at the two microphones will remain steady. However, when the user is speaking, generally the characteristics of the sounds recorded by the first, microphone 40 will change significantly with respect to the characteristics of the signals from the second microphone 41, which might be located proximate the ear or top of the head of the user, depending upon how the physical structure of the headset is implemented. This will provide an additional indication that the user is speaking. The processing circuitry 30 may further use such a feature to determine whether or not to transmit to the terminal in accordance with one aspect of the invention. Further details with respect to such a feature is recited in U.S. Patent Application 10/671,142 entitled "APPARATUS AND METHOD FOR DETECTING USER SPEECH", filed on September 25, 2003 and now abandoned, filed and incorporated herein by reference in its entirety. Therefore, the processing circuitry 30, and particularly the circuitry 48, which receives the sampled frames from filters 44, provides a further level of analysis to determine when frames should be transmitted to terminal 10. As such, extraneous noise in the form of human speech, which is not user speech or speech directly from the user, might not be transmitted based upon how the

headset perceives that human speech, as indicated by the characteristics of the signals from the multiple microphones 40, 41. “

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM D. CUMMING whose telephone number is 571-272-7861. The examiner can normally be reached on Tuesday- Friday, 11:00am-8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WILLIAM D CUMMING/
Primary Examiner
Art Unit: 2617